



## Basic features

<b>Approval/Conformity</b>	CE ATEX FM cCSAus EAC WEEE
<b>Basic standard</b>	EN IEC 60079-0 EN 60079-11 EN 60079-26 IEC 60079-0 IEC 60529 IEC 60947-5-6 CSA Class 258 04 CSA Class 258 84 FM Class 3600 FM Class 3610 FM Class 3810 Including Supplement 1 ANSI/NEMA 250
<b>Ex marking</b>	ATEX: Ex II 1G Ex ia IIC T6 Ga Ta: -20 ... 55 °C Ex II 2G Ex ia IIC T6 Gb Ta: -20 ... 70 °C Ex 1D Ex ia IIIC T90°C Ta: -20 ... 70 °C NEC: CSA/FM Class I, Division 1, Groups ABCD Class II, Division 1, Groups EFG Class III

## Display/Operation

<b>Function indicator</b>	no
<b>Power indicator</b>	no

## Electrical connection

<b>Cable length L</b>	2 m
<b>Conductor cross-section</b>	0.14 mm <sup>2</sup>
<b>Connection type</b>	Cable, 2.00 m, PVC
<b>Number of conductors</b>	2
<b>Polarity reversal protected</b>	no

## Electrical data

<b>Current consumption max., damped</b>	1 mA
<b>Current consumption min., undamped</b>	2.1 mA
<b>Internal capacitance Ci max.</b>	80 nF
<b>Internal inductance Li max.</b>	0.07 nH
<b>Operating voltage Ub</b>	7.7...9 VDC
<b>Permiss. series resistance Rv</b>	550...1100 Ohm
<b>Rated insulation voltage Ui</b>	75 V DC
<b>Rated operating voltage Ue DC</b>	8.2 V
<b>Rated series resistance Rv</b>	1000 Ohm
<b>Ready delay tv max.</b>	1 ms
<b>Switching frequency</b>	2000 Hz

## Environmental conditions

<b>Ambient temperature</b>	-20...70 °C
<b>EN 60068-2-27, Shock</b>	Half-sinus, 30 gn, 11 ms
<b>EN 60068-2-6, Vibration</b>	55 Hz, amplitude 1 mm, 3x30 min
<b>IP rating</b>	IP67

## Functional safety

<b>MTTF (40 °C)</b>	4816 a
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Inductive Sensors  
**BES M08MD-GNX10B-EV02-EEX**  
Order Code: **BES02ZT**

**BALLUFF**

**Interface**

Interface NAMUR

**Material**

Housing material Brass, Nickel-free coated  
Material jacket PVC  
Material sensing surface PBT

**Mechanical data**

Dimension  $\varnothing 8 \times 30$  mm  
Installation flush  
Size M8x1  
Tightening torque 2.5 Nm

**Range/Distance**

Assured operating distance  $S_a$  0.8 mm  
Rated operating distance  $S_n$  1 mm  
Real switching distance  $s_r$  1 mm  
Repeat accuracy max. (% of  $S_r$ ) 5.0 %  
Temperature drift max. (% of  $S_r$ ) 10 %  
Tolerance  $S_r$   $\pm 10$  %

**Remarks**

Operating manual must be followed.  
Operate only with suitable approved switching amplifier.  
Use only in approved intrinsically safe circuits with max. values  $U_i = 15$  V,  $I_i = 50$  mA,  $P_i = 120$  mW.  
For more information about MTTF and B10d see MTTF / B10d Certificate

Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

**Wiring Diagrams**

